

Amendments to the Claims

Claims 1 and 18 are amended below. The remaining claims are set forth below in original form.

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1. (currently amended) A method of establishing a private network community (PNC) among a plurality of clients configured to be linked over one or more of a plurality of communication channels, said method comprising:
 - A. linking the plurality of clients to a virtual network generation (VNG) system, having access to said communication channels, and establishing a set of PNC attributes, including establishing a set of client attributes associated with said clients and a set of network attributes;
 - B. accessing a VNG system data store including PNC information related to said plurality of clients and a plurality of network types;
 - C. authenticating ~~each of~~ said clients, as a function of said PNC information; and
 - D. establishing said PNC as a function of said set of PNC attributes, including designating a virtual PNC address for each of said clients, and establishing a control channel for coordinating and controlling links between said clients via the VNG system, linking said clients for session communications either directly or via the VNG system as if they were connected via a LAN.
 2. (Original) The method according to claim 1 wherein said plurality of clients is operated by a corresponding plurality of users and said data store includes identification information related to said plurality of users.

3. (Original) The method according to claim 1 wherein at least one of said plurality of clients is chosen from a group of network enabled devices comprising:

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- 1) a personal computer;
- 2) a personal digital assistant;
- 3) a mobile cellular telephone;
- 4) a network appliance;
- 5) a digitally loadable music or video player;
- 6) an on-line video game; and
- 7) a home appliance.

4. (Original) The method according to claim 1 wherein at least one of said plurality of communication channels is chosen from a group comprising:

- 1) Internet;
- 2) a cable network;
- 3) metropolitan area networks (MAN);
- 4) a power-line network;
- 5) a telephone line;
- 6) a satellite link; and
- 7) wireless networks.

5. (Original) The method according to claim 1 wherein said client attributes include, for each client:

- 1) an identification attribute, identifying said client; and

2) a PNC address attribute, identifying a network location of said client.

6. (Original) The method according to claim 1 wherein said network attributes include:

1) a security management attribute, identifying a network security level to which said PNC must adhere.

7. (Original) The method of claim 1 further comprising:

E. selectively disestablishing said PNC in response to a termination event.

8. (Original) The method according to claim 7 wherein step E includes:

1) disassociating each of said designated addresses from said clients.

9. (Original) The method according to claim 7 wherein said termination event includes one of more of the following:

- 1) issuing a termination command by at least one of said clients to said VNG system;
- 2) detecting completion of a predefined set of tasks;
- 3) detecting a security violation; and
- 4) lapsing of a termination point in time.

10. (Original) The method according to claim 1 further comprising:

E. modifying said PNC attributes; and

F. modifying said client links as a function of said modified PNC attributes.

11. (Original) The method of claim 1, further comprising:

A4 E. sending a packet across said PNC, from a first client to a second client, wherein said sending said packet includes:

- 1) grabbing a packet destined for the virtual network card;
- 2) identifying said packet;
- 3) wrapping said packet in a wrapper frame by said first client;
- 4) transmitting said packet from said first client and receiving said packet by said second client;
- 5) unwrapping said packet by said second client, and
- 6) injecting said packet into a networking driver interface system of said second client, as if said packet was received by a standard network card of said second client.

12. (Original) The method of claim 11 wherein sub-step 4) includes:

- a) sending said packet to a VNG server of said VNG system; and
- b) forwarding said packet by said VNG server to a set of destinations clients, including said second client, associated with said packet.

13. (Original) The method of claim 12, wherein said first client implements a first protocol and said second client implements a second protocol, and wherein sub-step 3 includes wrapping said packet in a frame compatible with said first protocol and sub-step b) includes:

- i. unwrapping said packet; and
- ii. re-wrapping said packet in a frame that is compatible with

said second protocol.

iii. transmitting said re-wrapped packet to said second client.

A4 14. (Original) The method of claim 11, wherein sub-step 3) includes compressing said message according to said network attributes and sub-step 5) includes decompressing of said message.

15. (Original) The method of claim 11, wherein sub-step 3) includes encrypting said message according to said network attributes and sub-step 5) includes decrypting said message.

16. (Original) The method of claim 1, wherein said VNG system includes a billing manager, said method further comprising:

E. monitoring usage of said PNC by said plurality of devices and generating, as a function of said usage, a corresponding usage bill.

17. (Original) The method of claim 1 wherein step B includes:

1) accessing a VNG system Web site.

18. (currently amended) A virtual network generation (VNG) system configured to establish and manage a plurality of PNCs among a plurality of clients and over a plurality of communication channels, said VNG system comprising:

A. a data store including PNC information related to said clients and a plurality of network types;

B. a VNG processing device coupled to said data store, said VNG processing device including:

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- 1) an authentication manager, configured to receive, store and selectively authenticate a PNC workgroup of clients from said plurality of clients, as a function of a client identification;
 - 2) a PNC manager, configured to receive and store a set of PNC attributes related to a PNC to be established, wherein said PNC attributes identify the PNC workgroup and a set of PNC security requirements;
 - 3) a PNC routing manager, configured to generate a PNC address for each PNC workgroup client; and
 - 4) a communication manager, configured to ~~link said clients~~ establish the PNC as a function of said set of PNC attributes and the PNC addresses, including establishing a control channel for coordinating and controlling links between the PNC workgroup clients via the VNG processing device and to enable linking of said PNC workgroup clients for session communications within the PNC either directly or via the VNG processing device as if they were connected via a LAN, ~~as a function of said PNC attributes;~~ and
- C. a network interface system coupling said VNG processing device to at least one of said plurality of communication channels.

19. (Original) A VNG system according to claim 18, further comprising:

- D. a PNC termination manager, configured to selectively terminate said PNC in response to a termination event.

20. (currently amended) A VNG system according to claim 19 wherein said termination manager is

configured to disassociate each of said designated PNC addresses from said clients.

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21. (currently amended) A VNG system according to claim 19 wherein said termination event includes at least one of the following:

- 1) issuing a termination command by at least one of said PNC workgroup clients to said VNG system;
- 2) detecting completion of a predefined set of tasks;
- 3) detecting a security violation; and
- 4) lapsing of a termination point in time.

22. (Original) A VNG system according to claim 18 wherein said plurality of clients is operated by a corresponding plurality of users and said data store includes identification information related to said plurality of users.

23. (Original) A VNG system according to claim 18 wherein at least one of said plurality of clients is chosen from a group of network enabled devices comprising:

- 1) a personal computer;
- 2) a personal digital assistant;
- 3) a mobile cellular telephone;
- 4) a network appliance;
- 5) a digitally loadable music or video player;
- 6) an on-line video game; and
- 7) a home appliance.

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24. (Original) A VNG system according to claim 18 wherein at least one of said plurality of communication channels is chosen from a group comprising:

- 1) Internet;
- 2) a cable network;
- 3) metropolitan area networks (MAN);
- 4) a power-line network;
- 5) a telephone line;
- 6) a satellite link; and
- 7) wireless networks.

25. (currently amended) A VNG system according to claim 18 wherein said ~~client~~ PNC attributes include, for each PNC workgroup client:

- 1) an identification attribute, identifying said client; and
- 2) a PNC address attribute, corresponding to the PNC address, the PNC address attribute for identifying a network location of said PNC workgroup client.

26. (Original) A VNG system according to claim 18, further including:

- D. a front end VNG system Web site.

27. (currently amended) A VNG system according to claim 18 wherein said ~~network~~ PNC attributes include:

- 1) a security management attribute, identifying a network security level to which said PNC must adhere.

28. (currently amended) A VNG system according to claim 18 wherein said PNC manager includes
configured to:

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- a) a PNC attribute modifier, configured for modifying a set of PNC attribute for at least one PNC workgroup client; and
 - b) a PNC client link modifier, configured to modify said PNC workgroup client links as a function of a the set of modified PNC attributes.

29. (currently amended) A VNG system according to claim 18, wherein each PNC workgroup client in said PNC includes:

- D. a client module configured to wrap packets to be transmitted in a wrapper frame, wherein said wrapper frame is compatible with at least one of said plurality of communication channels and a corresponding communication protocol.

30. (Original) A VNG system according to claim 18, wherein message traffic within said PNC is encrypted.

31. (currently amended) A VNG system according to claim 18, wherein said VNG processing device further includes

- 5) a usage monitor configured to monitor usage of said PNC by said ~~plurality of~~ PNC workgroup clients and to generate corresponding usage information; and
- 6) a billing manager, configured to generate a corresponding invoice, as a function of said usage information.